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IJ.S. Depar	tment o	f Commerce, Pater	nt and Trademar	k Office	Docket No	-	et 1 of 7 she Serial No.	<u> 501(0)</u>
(PTO Form	A1 Number Date Name A1 6,571,672 06/03/2003 Rudd				WEAT/002	24.C1	Unknown	
INFORMAT	ION DI	SCLOSURE STAT	EMENT BY AP	PLICANT	Applicant	-	Confirmatio	n No.:
					Metcalfe,	et al.	Unknown	
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	E	Examiner			Herewith		Unknown	
U.S. Paten	t Docui	nents	-					
*Examiner Initial					Class	Subclass	Filing Date I Appropriate	f
	A1	6,571,672	06/03/2003	Rudd	083	036		,,
-	A2	6,543,552	04/08/2003	Metcalfe	175	057		_
	А3	6,527,049	03/04/2003	Metcalfe et al.	166	277		
	A4	6,457,533	10/01/2002	Metcalfe et al.	166	381		
	A5	6,457,532	10/01/2002	Simpson	166	380		
	A6	6,454,013	09/24/2002	Metcalfe et al.	166	382		
	A7	6,446,323	09/10/2002	Metcalfe et al.	29	523		
	A8	6,425,444	07/30/2002	Metcalfe et al.	166	387		
	A9	6,325,148	12/04/2001	Trahan	166	297		
,,	A10	6,135,208	10/24/2000	Gano et al.	166	313		
	A11	6,098,717	08/08/2000	Bailey et al.	166	382		
	A12	6,070,671	06/06/2000	Cumming et al.	166	381		
	A13	6,029,748	02/29/2000	Forsyth et al.	166	380		
	A14	6,021,850	02/08/2000	Wood et al.	166	380		
Foreign Pa	tent Do	ocuments						
*Examiner	:	Document	Date	Country	Class	Subclass	Translat	tion
Initial		Number					YES	NO
	B1	EP 0 961 007	12/01/1999	Europe	E21B	33/10		X
	B2	EP 0 952 305	04/23/1998	Europe	E21B	43/10		X
	B3	EP 0 881 354	12/02/1998	Europe	E21B	43/10		X
	B4	WO 99/23354	05/14/1999	WIPO	E21B	43/10		X
OTHER AF	₹T							
*Examiner Initial		Including Author, Ti	itle, Date, Pertine	nt Pages, Etc.				
	C1	UK Patent Office	Search Report	from GB 9928941	.5, Dated 2	5 April 2000) <u>. </u>	
	C2	PCT International	•					
	C3	Metcalfe, P "Ex International, Vol.					troleum Engi	<u>neer</u>
Examiner					Date Cons	sidered		

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U.S. Depart	tment o	f Commerce, Pater	nt and Tradema	rk Office	Docket No) .	Serial No.	
(PTO Form					WEAT/002	24.C1	Unknown	
NFORMAT	ION DI	SCLOSURE STAT	EMENT BY AP	PLICANT	Applicant		Confirmation	n No.
				}	Metcalfe,	et al.	Unknown	
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<u> </u>		Examiner			Herewith		Unknown	
U.S. Paten	t Docui	ments						
Examiner		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date Appropriate	
	A15	5,979,571	11/09/1999	Scott et al.	175	61		
	A16	5,960,895	10/05/1999	Chevallier et al.	175	27		
	A17	5,924,745	07/20/1999	Campbell	285	90		
	A18	5,901,789	05/11/1999	Donnelly et al.	166	381		
	A19	5,901,787	05/11/1999	Boyle	166	135		-
	A20	5,887,668	03/30/1999	Haugen et al.	175	79	,	
	A21	5,785,120	07/28/1998	Smalley et al.	166	55		
	A22	5,706,905	01/13/1998	Barr	175	61		
	A23	5,685,369	11/11/1997	Ellis et al.	166	195	,	-
	A24	5,667,011	09/16/1997	Gill et al.	166	295		
	A25	5,636,661	06/10/1997	Moyes	137	614.2		
	A26	5,560,426	10/01/1996	Trahan et al.	166	120		
	A27	5,553,679	09/10/1996	Thorp	175	73		-
	A28	5,520,255	05/28/1996	Barr et al.	175	24		
	A29	5,472,057	12/05/1995	Winfree	175	57		
	A30	5,435,400	07/25/1995	Smith	175	61		
	A31	5,409,059	04/25/1995	McHardy	166	208		
	A32	5,366,012	11/22/1994	Lohbeck	166	277		
For ign Pa	itent D	ocuments						
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Transla	tion
uai		, Mullipel					YES	NC
	B5	WO 99/18328	04/15/1999	WIPO	E21B	23/01		X
	B6	WO 99/06670	02/11/1999	WIPO	E21B	43/10	ļ	X
	B7	WO 99/02818	01/21/1999	WIPO	E21B	43/10		X
	B8	WO 98/00626	01/08/1998	WIPO	E21B	43/10		X
Examiner					Date Cons	sidered		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Depar	tment o	f Commerce, Pater	nt and Tradema	rk Office	Docket No		Serial No.	
PTO Form	1449 n	nodified)			WEAT/002	24.C1	Unknown	
INFORMAT	TION DI	SCLOSURE STAT	TEMENT BY AP	PLICANT	Applicant		Confirmation No	
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*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date Appropriate	
	A33	5,348,095	09/20/1994	Worrall et al.	166	380		
	A34	5,322,127	06/21/1994	McNair et al.	166	313		
	A35	5,307,879	05/03/1994	Kent	166	382		
	A36	5,301,760	04/12/1994	Graham	175	61		
	A37	5,271,472	12/21/1993	Leturno	175	107		
	A38	5,267,613	12/07/1993	Zwart et al.	166	178		_
	A39	5,156,209	10/20/1992	McHardy	166	324		
	A40	5,052,849	10/01/1991	Zwart	403	300		
	A41	5,052,483	10/01/1991	Hudson	166	55		
	A42	5,014,779	05/14/1991	Meling et al.	166	55.7		
	A43	4,997,320	03/05/1991	Hwang	408	22		
	A44	4,967,322	12/11/1990	Abdrakhmanov et al.	175	57	_	
	A45	4,883,121	11/28/1989	Zwart	166	217		
	A46	4,866,966	09/19/1989	Hagan	72	75	-	· <u>-</u> ,
	A47	4,848,469	07/18/1989	Baugh et al.	166	382		
	A48	4,807,704	02/28/1989	Hsu et al.	166	313		
	A49	4,697,640	10/06/1987	Szarka	166	120		
	A50	4,626,129	12/02/1986	Kothmann et al.	405	43		
	A51	4,588,030	05/13/1986	Blizzard	166	120		
	A52	4,581,617	04/08/1986	Yoshimoto et al.	346	108		
	A53	4,567,631	02/04/1986	Kelly	29	157.3	-	
For ign Pa	atent Do	ocuments					' -	
Examiner		Document	Date	Country	Class	Subclass	Transla	tion
nitial 		Number					YES	NC
	B9	WO 97/21901	06/19/1997	WIPO	E21B	17/08		X
	B10	WO 94/25655	11/10/1994	WIPO	D04C	1/06		X
	B11	WO 93/25800	12/23/1993	WIPO	E21B	43/10		X
Examiner					Date Cons	sidered		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

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U.S. Depar	tment of	f Commerce, Paten	it and Tradema	rk Office	Docket No		eet 4 of 7 she Serial No.	(-)
(PTO Form					WEAT/002	24.C1	Unknown	
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					Metcalfe e	et al.	Unknown	
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J.S. Paten	t Docur	nents						
Examiner nitial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	•
	A54	4,531,581	07/30/1985	Pringle et al.	166	120		
	A55	4,505,612	03/19/1985	Shelley, Jr.	405	101		
	A56	4,505,142	03/19/1985	Kelly	72	54		
	A57	4,502,308	03/05/1985	Kelly	72	58		
	A58	4,487,630	12/11/1984	Crook et al.	75	123B		
	A59	4,483,399	11/20/1984	Colgate	166	308		
	A60	4,470,280	09/11/1984	Kelly	72	61		
	A61	4,450,612	05/29/1984	Kelly	72	62		
	A62	4,445,201	04/24/1984	Pricer	365	154		
	A63	4,429,620	02/07/1984	Burkhardt et al.	91	395		
	A64	4,414,739	11/15/1983	Kelly	29	727		
	A65	4,407,150	10/04/1983	Kelly	72	61		
	A66	4,387,502	06/14/1983	Dom	29	568		
	A67	4,382,379	05/10/1983	Kelly	73	46		
	A68	4,362,324	12/07/1982	Kelly	285	119		
	A69	4,359,889	11/23/1982	Kelly	72	62		
	A70	4,349,050	09/14/1982	Bergstrom et al.	. 138	147		
	A71	4,324,407	04/13/1982	Upham et al.	277	27		
	A72	4,319,393	03/16/1982	Pogonowski	29	434		
	A73	4,288,082	09/08/1981	Setterberg, Jr.	277	125		
	A74	4,159,564	07/03/1979	Cooper, Jr.	29	727		
For ign Pa	atent Do	ocuments						
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translat YES	ion NC
	B12	WO 93/24728	12/09/1993	WIPO	E21B	17/10	<u> </u>	X
	B13	WO 92/01139	01/23/1992	WIPO	E21B	17/08		X
	B14	DE 4133802C1	10/22/1992	Germany	F16L	9/12		X
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U.S. Depar	S. Department of Commerce, Patent and Trademark Office				Docket No).	Serial No.	
PTO Form	1449 m	nodified)			WEAT/002	24.C1	Unknown	
NFORMA	TION DI	SCLOSURE STATI	EMENT BY AP	PLICANT	Applicant		Confirmatio	n No.
					Metcalfe et al.		Unknown	
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 	· ·	Examiner			Herewith		Unknown	
U.S. Paten	t Docur	ments		<u>_</u>				
Examiner nitial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date I Appropriate	
	A75	4,127,168	11/28/1978	Hanson et al.	166	123		
	A76	4,069,573	01/24/1978	Rogers, Jr. et al.	29	421 R		
	A77	3,977,076	08/31/1976	Vieira et al.	30	103		
	A78	3,948,321	04/06/1976	Owen et al.	166	277		
	A79	3,911,707	10/14/1975	Minakov et al.	72	76	 	
	A80	3,820,370	06/28/1974	Duffy	72	75		
	A81	3,818,734	06/25/1974	Bateman	72	75		
	A82	3,785,193	01/15/1974	Kinley et al.	72	393		
	A83	3,780,562	12/25/1973	Kinley	72	479		
	A84	3,776,307	12/04/1973	Young	166	125		
	A85	3,746,091	07/17/1973	Owen et al.	166	207		
	A86	3,712,376	01/23/1973	Owen et al.	166	277		
	A87	3,691,624	09/19/1972	Kinley	29	523		
	A88	3,689,113	09/05/1972	Blaschke	285	90		
	A89	3,669,190	06/13/1972	Sizer et al.	166	315		
	A90	3,583,200	06/08/1971	Cvijanovic et al.	72	393		
	A91	3,489,220	01/13/1970	Kinley	166	277		
	A92	3,477,506	11/11/1969	Malone	166	207		<u>.</u>
	A93	3,467,180	09/16/1969	Pensotti	165	180		
	A94	3,354,955	11/28/1967	Berry	166	14		
	A95	3,353,599	11/21/1967	Swift	166	15		
Foreign Pa	atent Do	ocuments					· · · · · · · · · · · · · · · · · · ·	_
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translat YES	tion
	B15	DE 3 213 464A1	10/13/1983	Germany	B23D	45/12	1.50	X
	B16	GB 2 329 918A	04/07/1999	Great Britain	E21B	43/10	 	$\frac{\lambda}{x}$
	B17	GB 2 320 734	07/01/1998	Great Britain	E21B	33/127		X
Examiner		32 2 320 704	1 3.73 17 1000	J. J	Date Cons			

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U.S. Depa	rtment o	f Commerce, Pater	nt and Tradema	rk Office	Docket No	ο.	Serial No.	
(PTO Form	า 1449 n	nodified)			WEAT/00	24.C1	Unknown	
INFORMA	TION DI	SCLOSURE STAT	EMENT BY AP	PLICANT	Applicant		Confirmation No	
					Metcalfe e	et al.	Unknown	
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	1	Examiner			Herewith		Unknown	
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*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date Appropriate	
	A96	3,326,293	06/20/1967	Skipper	166	150		
	A97	3,297,092	01/10/1967	Jennings	166	207		
	A98	3,245,471	04/12/1966	Howard	166	46		
	A99	3,203,483	08/31/1965	Vincent	166	207		
	A100	3,203,451	08/31/1965	Vincent	138	143		
	A101	3,195,646	07/20/1965	Brown	166	208		
	A102	3,191,680	06/29/1965	Vincent	166	46		
	A103	3,191,677	06/29/1965	Kinley	166	14		
	A104	3,186,485	06/01/1965	Owen	166	63		
	A105	3,179,168	04/20/1965	Vincent	166	14		•
	A106	3,167,122	01/26/1965	Lang	166	14		
	A107	3,087,546	04/30/1963	Wooley	166	46		
	A108	3,039,530	06/19/1962	Condra	166	55		
	A109	3,028,915	04/10/1962	Jennings	166	16		
	A110	2,898,971	08/11/1959	Hempel	153	82		
	A111	2,663,073	12/22/1953	Bieber et al.	29	148		
	A112	2,633,374	03/31/1953	Boice	285	118		-
	A113	2,627,891	02/10/1953	Clark	153	82		
	A114	2,519,116	08/15/1950	Crake	166	10		
For ign Pa	atent Do	ocuments	1	1			<u> </u>	_
Examiner		Document	Date	Country	Class	Subclass	Transla	tion
Initial		Number					YES	NC
	B18	GB 2 313 860B	06/06/1996	Great Britain	E21B	10/34		X
	B19	GB 2 216 926A	10/18/1989	Great Britain	E21B	7/20		X
	B20	GB 1 582 392	01/07/1981	Great Britain	B21D	39/10		X
	B21	GB 1 457 843	12/08/1976	Great Britain	B21D	39/10		X
	B22	GB 1 448 304	09/02/1967	Great Britain	E21B	33/13		X
Examiner					Date Cons	sidered		

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J.S. Depar	tment of	Commerce, Patent	k Office	Docket No. Serial No.				
PTO Form					WEAT/002	24.C1	Unknown	
					Applicant		Confirmation No.	
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*Examiner Initial			Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	f
<u>.</u>	A115	2,499,630	03/07/1950	Clark	153	81		
-	A116	2,424,878	07/29/1947	Crook	154	82		
	A117	2,383,214	08/21/1945	Prout et al.	153	82		
	A118	2,214,226	09/10/1940	English	166	1		
	A119	2,017,451	10/15/1935	Wickersham	166	10		
	A120	1,981,525	11/20/1934	Price	166	4		
	A121	1,930,825	10/17/1933	Raymond				
	A122	1,880,218	10/04/1932	Simmons				
	A123	1,597,212	08/24/1926	Spengler				
	A124	1,569,729	01/12/1926	Duda				
	A125	1,561,418	11/10/1925	Duda				
-	A126	1,545,039	07/07/1925	Deavers				
	A127	1,324,303	12/09/1919	Carmichael				
	A128	1,301,285	04/22/1919	Leonard				
	A129	988,504	03/28/1911	Wiet				
	A130	761,518	05/31/1904	Lykken				
	A131	2001-0040054-A1	11/15/2001	Haugen	175	061		
	A132	2002-0166668-A1	11/14/2002	Metcalfe	166	378		
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*Examiner		Document	Date	Country	Class	Subclass	Translation	
Initial		Number					YES	NO
	B23	GB 1 277 461	06/14/1972	Great Britain	B21D	39/04		X
	B24	GB 997 721	07/07/1965	Great Britain	B21D	F061		X
	B25	GB 792 886	04/13/1956	Great Britain	E21D	F061		X
	B26	GB 730 338	03/29/1954	Great Britain	84	4		X
Examiner					Date Con	sidered		